

ITEM: 21

SUBJECT: County of Sacramento Department of Waste Management and Recycling,  
Kiefer Landfill Groundwater Extraction and Treatment Plant, Sacramento County

BOARD ACTION: *Consideration of NPDES Permit Renewal (NPDES Permit No. CA0083681)*

BACKGROUND: The County of Sacramento Department of Waste Management and Recycling (Discharger) is the owner and operator of the Kiefer Landfill Groundwater Extraction and Treatment Plant (Facility), an on-site groundwater extraction and treatment plant established as a means of controlling contaminant migration and removing contaminants from groundwater. The groundwater treatment system is fed by a groundwater extraction network consisting of 14 extraction wells. Groundwater extracted from the extraction well network is delivered to a central air stripping facility that includes two air stripping towers for the removal of Volatile Organic Compounds (VOCs) from groundwater and a vapor-phase carbon bed for the treatment of off-gas. The existing NPDES permit (R5-2007-0014) allows a discharge of 2.17 mgd of treated groundwater to Deer Creek, a tributary of the Cosumnes River.

Cleanup and Abatement Order (CAO) No. 91-725 was issued by the Central Valley Water Board due to contamination of groundwater at the Sacramento County Kiefer Landfill, a Class III municipal solid waste disposal facility. VOCs identified in the CAO include vinyl chloride, tetrachloroethene, trichloroethene, 1,2-dichloroethene, trichloroethane, 1,1-dichloroethane, dichlorodifluoromethane, trichlorofluoromethane, dichloromethane, and chloroform. The proposed NPDES Permit renewal includes effluent limitations for VOCs currently present in the groundwater.

ISSUES: Public comments on the tentative NPDES permit were received on 15 June 2012 from the Discharger and the United States Environmental Protection Agency (EPA), Region IX. The following is a summary of the comments on the major permitting issues and Central Valley Water Board staff responses. Detailed comments and responses are included in the Staff Response to Comments document included in the agenda package.

**Sampling Frequency of Total Residual Chlorine.** The Discharger requests a change in the minimum sampling frequency for Total Residual Chlorine from 1/Week or Continuous to 1/Month or Continuous. Chlorine is only used for occasional well maintenance, not in the treatment system. Additionally, chlorine has not been detected in the past 5 years of weekly monitoring. Central Valley Water Board staff concurs and modified the Order accordingly.

**WQBELS for Selenium.** EPA comments that the permit should impose water quality-based effluent limitations (WQBELS) for selenium based on one sample exceeding the water quality criteria.

The Discharger collected three samples for selenium in April, May, and June 2011. The April sample was measured at 9.6 µg/L, which exceeds the California Toxics Rule chronic criterion, however, the subsequent two samples were non-detect with a method detection level of 0.5 µg/L. Due to the limited data set and inconsistent results, the tentative NPDES permit proposes additional monitoring, rather than establishment of WQBELS at this time. Section 1.3 of the State Implementation Plan allows the regional boards to require additional monitoring for a pollutant in place of an effluent limitation if data are unavailable or insufficient.

Selenium has not been identified as a constituent of concern for the groundwater cleanup and is not routinely monitored. Once every 5 years selenium is monitored in an upgradient groundwater monitoring well, with the last result showing non-detect at a detection level of 5 µg/L. At the time of effluent sampling in 2011 the Discharger had recently implemented new maintenance procedures to control the discharge of manganese. In this case, additional monitoring is warranted, because until the Discharger fully implements its maintenance procedures, and sufficient data is collected to clearly represent the discharge, it remains uncertain if the one elevated sample result is representative of the discharge and if there is reasonable potential for the discharge to cause or contribute to an exceedance of the CTR criteria for selenium.

If additional monitoring demonstrates that the discharge has elevated selenium that results in a finding of reasonable potential, the permit can be reopened to add an effluent limitation. In addition, the proposed permit has been modified to require the Discharger to immediately develop a work plan and treatment feasibility study to control selenium in the event that the additional data demonstrates that reasonable potential exists.

RECOMMENDATION: Adopt NPDES Permit Renewal

Mgmt. Review \_\_\_\_\_

Legal Review \_\_\_\_\_

2/3 August 2012  
11020 Sun Center Dr. #200  
Rancho Cordova, CA 95670